1998 Annual Drinking Water Quality Report

City of Bedford Municipal Water System

- **Meets all drinking water standards**
- **Is continuously tested**
- **Is safe to drink**

The City of Bedford Water Treatment System is pleased to present to you this Annual Drinking Water Quality Report for 1998. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the safety and quality of your water.

TYPE AND SOURCE OF OUR WATER SUPPLY

Our main water source is the Stoney Creek Reservoir located on Rt. 640 in Bedford County, which is a surface water source. We have a supplemental source that is used presently during periods of dry weather and could be utilized in the future as demand increases. This surface water source is located at the head of Big Otter River, off Route 43 North, in the Kelso area of Bedford County. At the present time we monitor the drainage areas of our source water for types of operations that may contribute contaminants. This source water protection will receive more attention in the future as a result of the Safe Drinking Water Act. The Virginia Department of Health will be completing an assessment of the drainage area for our source water and any future development of the drainage areas of our source water will be monitored.

STRIVING FOR EXCELLENCE

We are pleased to report that our drinking water is safe and meets federal and state requirements.

This report shows our water quality and what it means. If you have any questions about this report

or concerning your water utility, please contact your Water Treatment Facility Superintendent at 586-7197 during the hours of 8:00 am to 4:00 p.m., Monday through Friday. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled council meetings. They are held on the second and fourth Tuesday at 7:30 p.m. each month in the City of Bedford Council chambers located in the City of Bedford Municipal Building.

SUBSTANCES EXPECTED TO BE IN OUR DRINKING WATER SUPPLY

The City of Bedford Water Treatment System routinely monitors for constituents in your drinking water according to Federal and State laws. The following table shows the results of our monitoring for detected contaminants for the period of January 1st to December 31st, 1998**.** We are allowed to

monitor for certain regulated contaminants less often than once a year. Where this is applicable in the table, it will be noted. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

In the following table you will find many terms and abbreviations you might not be familiar with.To help you better understand these terms we've provided the following definitions:

Parts per million (ppm) or Milligrams per liter (mg/l) – one part per million corresponds to one minute in two years or a single penny in $10,000.

Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level - The "Maximum Allowed" (**MCL**) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal - The "Goal"(**MCLG**) is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Facts & Figures

The City of Bedford Water Treatment System is required to test for over 75 constituents to make sure that the water you drink is safe. We are pleased to report that for the calendar year 1998, the

water delivered to your homes and businesses complied with all state and federal requirements. The regulated constituents shown were detected in our finished drinking water as analyzed between January 1 and December 31, 1998. Finished water is the water that leaves our treatment plant and is distributed throughout the system.

Contaminant	**Violation** Y/N	**Level Detected**	**Range**	% Meeting Requirements	**Unit Measurement**	**MCL**	**MCLG**	**Likely Source of Contamination**
1. Fluoride	N	0.89 Average	0.37–1.35	-	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth
2. Turbidity	N	0.35	0.00 to 0.35	100 %	NTU	0.50	N/A	Soil run off
3. Copper	N	0.082 90th Percentile, 1 of 20 samples exceeded action level	< 0.020 to 2.790	-	ppm	AL = 1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Contaminant	**Violation** Y/N	**Level Detected**	**Range**	% Meeting Requirements	**Unit Measurement**	**MCL**	**MCLG**	**Likely Source of Contamination**
4. Lead	N	690th Percentile, 2 of 20 samples exceeded action level	<1 to 90	-	ppb	AL = 15	15	Corrosion of household plumbing systems; erosion of natural deposits
5. Nitrate / Nitrite	N	0.23	-	-	ppm	10	10	Runoff from fertilizer use; erosion of natural deposits
6. Gross Alpha Sampled 01-22-97	N	0.0	-	-	pCi/L	5	0	Erosion of natural deposits
7.Chloroform	N	8.5	-	-	ppb	NR	NR	By-product of drinking water chlorination

* Gross Alpha samples were collected for analysis on January 22, 1997. Next required sampling will be collected between 01-01-01 and 12-31-04

PHYSICAL AND MINERAL CHARACTERISTICS

for calendar year 1998

In addition to the required analysis that is mainly completed by independent labs we also conduct over 3,000 individual operational tests on your water during the year. The following constituents analyzed in your water on a daily basis are indicators of the appearance, taste, and mineral content of the drinking water delivered to your tap.

Constituent

(with unit of measurement) Frequency Annual Average

pH, standard units every 4 hours 7.4

Alkalinity, ppm every 4 hours 18.0

Total Hardness, ppm once per day 38

Calcium Hardness, ppm once per day 32

CO2, ppm once per day 4

Iron, ppm once per day 0.01

Manganese, ppm once per day Not Detected

Temperature, Celsius every 4 hours 14

Free Chlorine, ppm continuous monitor 1.4

in addition to every 4 hours

Special Health Concerns

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791).

Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person's total lead exposure. All potential sources of lead in the household should be identified and removed, replaced or reduced.

As you can see by the table, our system had no violations. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water IS SAFE at these levels.

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL

level for a lifetime to have a one-in-a-million chance of having the described health effect.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. Thank you for understanding.

We at the City of Bedford Water Treatment System work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.

Please call our office if you have questions at 586-7197.

FOR YOUR INFORMATION

How will I know if there is a problem with my water?

If the amount of any substance exceeds limits , you would be notified through newspapers, radio, and/or other means. With notification, you will be instructed on what appropriate actions you can take to protect your family's health.

If I want more information who do I contact?

Water Plant business hours of operation are 8:00 a.m. – 4:00 p.m. and can be reached at 540-586-7197. You can call this number for an emergency 24 hours a day. There is always an operator on duty. Tours of our facility can be scheduled during normal business hours.

To reports leaks & Overflows call 540-586-7181 24 hours a day.

Customer Service call call 540-586-7181 during the hours of 7:00 a.m. – 4:00 p.m.

Billing call 540-587-6047 during the hours of 8:30 a.m. and 4:30 p.m.

STEPS OF WATER TREATMENT

1. **Coagulation:** Alum and other chemicals are added to water to form tiny sticky particles called "floc" which attract the dirt particles.
2. **Flocculation:** Slow mixing to allow floc to get larger so it will gain weight and settle quicker.
3. **Sedimentation:** The heavy particles (floc) settle to the bottom and clear water moves to filtration.
4. **Filtration:** The water passes through filters that help to remove even smaller particles.
5. **Disinfection:** A small amount of chlorine is added to kill any harmful bacteria or microorganisms that may be in the water.
6. **Storage:** Water is pumped to a closed tank or reservoir where it flows through pipes to homes and businesses in the community.